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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/689,647	10/13/2000	Walter Hans Meissner	2925-0438P	7894

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EXAMINER	
SINGH, NOEL K	

ART UNIT	PAPER NUMBER
2153	

DATE MAILED: 09/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Applicati n No.	Applicant(s)	
	09/689,647	MEISSNER ET AL.	
	Examiner	Art Unit	
	Noel K Singh	2153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10/13/2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claims 1-15 are pending for examination.

Priority

1. No claim for priority has been made in this application. The effective filing date for the subject matter defined in the pending claims in this application is October 13, 2000.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-10 and 13-15 are rejected under 35 U.S.C. 102 (e) as being anticipated by Moberg et al., US Patent No. 6,578,084.

4. Moberg et al discloses a method of processing a message comprised of a plurality of layers (Fig. 2: The message layers used on the LAN, item 12A are Ethernet; IP; TCP and HTTP. The Wide Area Network link, item 16 uses layers HDLC, IP, TCP and HTTP), the method comprising the steps of:

- linking (dynamically chains or links the elements together) a plurality of layers (elements, correspond to protocol layers such as IP and TCP and other processes/layers such as encryption and compression) (col. 5, lines 34-41);
- and encoding (the chain walker is used to process/encode the packet or message through each of the layers in the chain) each layer of the plurality of layers after the step of linking is complete (col. 5, lines 42-48).

5. In referring to claim 2, Moberg et al further discloses:

- The method according to claim 1, wherein the step of linking comprises the steps of: determining an address of a first layer context (Fig. 5 and col. 9 lines 21-26. The content of item 104A is the address of the first element or layer context, item 106);
- passing the address of the first layer context to a second layer, which is adjacent to the first layer (Fig. 5 and col. 9 lines 27-31. Item 107 is the

second layer context, and its previous field has an address that points to the first layer content as shown by the arrow);

- and setting a second layer context address equal to the address of the first layer, whereby the contexts of the first and second layers are linked (Fig 5 and col. 9, lines 27-31. Since the first layer context have a next field with the address of the second layer context and the second layer context has a previous field with the address of the first layer context then the two contexts are linked).

6. In referring to claim 3, Moberg et al further discloses:

- The method according to claim 2, further comprising the steps of: passing the address of the linked contexts of the first and second layers to an adjacent subsequent layer (col. 9, lines 27-31. The previous field in the third layer context will have an address that point to the second layer context which is linked to the first layer context);
- setting a context of the adjacent subsequent layer equal to the address of the linked context of the first and second layers, whereby the linked context and the context to the adjacent subsequent layer are thereby linked (col. 9, lines 27-31. The next field in the second layer context will have an address that points to the third layer context and the third layer context, previous field, will have an address that points to the second layer

context that is linked to the first layer context. This will link all three layers contexts);

- and repeating the steps of linking layer contexts until each layer in the plurality of layer are linked (col. 9, lines 36-39. The next and previous fields are used to link the context of each layer for the plurality of layers using the addresses stored in these fields).

7. In referring to claim 4, Moberg et al further discloses:

- The method according to claim 3, wherein each layer context comprises variables (Fig. 5 106E, col. 9 lines 31-34)
- and methods (Fig. 5 106C, 106D and col. 9 lines 31-34).

8. Regarding claim 5, Moberg et al further discloses variables comprising:

- addresses to other context (Fig. 6, item 134 and col. 9, lines 63-65. The pointer to the next chain element is the address of the next layer context),
- header field values (col. 7, lines 54-59. Time-to-live counter and header checksum are field values in the IP header),
- buffer positions (Fig. 3, and col. 5, lines 26-33. The chain walker stripped the Ethernet header and looked into the IP header then put on an HDLC header therefore the buffer positions are inherently known),
- trailer field values (Fig. 3 and col. 5, lines 30-33. The HDLC protocol specifications and Ethernet specification require a CRC value that is a

trailer value. Therefore, inherently a trailer value variable must be present to completely format the HDLC message).

9. In referring to claim 6, Moberg et al further discloses:

- The method according to claim 4, wherein the methods comprise at least methods for encoding (encapsulation) and decoding (decapsulation), one method decoding being a method for furnishing a context (reading the IP header to obtain the destination address is furnishing a context) of a message (col. 5, lines 19-32).

10. In referring to claim 7, Moberg et al further discloses:

- The method according to claim 6, wherein the method for encoding comprises a method for computing message body dependent fields to include message length (the IP header has a total length field and a UDP packet has a Datagram length field. Therefore message length dependent fields will be inherently present in the encoding method) and CRC (Fig. 3, the HDLC packet must have an FCS field, that is a CRC. Therefore the CRC value is inherently present in the message encoding method) fields (Fig. 3 and col. 8, lines 7-14).

11. In referring to claim 8, Moberg et al further discloses:

- The method according to claim 1, wherein the step of encoding comprises the steps of: incrementing a current buffer position by a header length of a first layer (Fig. 3, the first layer HTTP Header, item 24, is appended directly to the message in the buffer, thereby incrementing the buffer position by the length of the HTTP header) in the linked plurality of layers;
- setting the current buffer position equal to the buffer position obtained by incrementing the current buffer position by the header length of the first layer (Fig. 3, the TCP header, item 26, which is the next layer after the HTTP layer, will occupy the address space in the buffer, obtained by incrementing the start of message address by the HTTP header length);
- and repeating the incrementing and setting steps for each of the remaining linked layers (the TCP header is added to the buffer then the IP header will be added by incrementing the buffer position by the size of the TCP header) (Fig. 3 and col. 5, lines 19-25).

12. In referring to claim 9, Moberg et al further discloses:

- The method according to claim 8, further comprising the steps of: calculating an aggregate value for layers having variable length headers (Moberg et al uses the TCP header as described in claim 8 above. TCP implementation requires the support of variable length headers as per RFC: 793, therefore the TCP header inherently calculates the aggregate

value of a variable length header); and setting the aggregate value equal to the header length in said incrementing step (Fig. 3).

13. In referring to claim 10, Moberg et al further discloses:

- The method according to claim 8, further comprising the step of: terminating buffer incrementing upon detection of an end-of-layer (the chain walker executes each chain element, which is a layer, in the chain until there are no more layers or end-of-layer) indicator (Fig. 6 and col. 10, lines 12-21).

14. In referring to claim 13, Moberg et al further discloses:

- The method according to claim 1, wherein the step of linking entails linking layers comprising unformatted (Ip-rewrite element decrements the time-to-live count and recalculates the IP header checksum value. Each layer will modify the message until the final layer when the message will be fully processed and thus totally formatted) layer values (col. 6, lines 30-40).

15. In referring to claim.14, Moberg et al further discloses:

- The method according to claim 1, wherein the encoding step encodes each layer of the linked plurality of layers into a single buffer (Fig. 3 item 20C. The reformatted message is a single buffer that includes the

application message and the headers for each layer) (Fig. 3 and col. 5, lines 19-32).

16. In referring to claim 15, Moberg et al further discloses:

- A method for processing, a formatted layered message (Fig. 2 item 18A shows the HTTP, TCP, IP and Ethernet layers required for the transmission of a message) for transmission over a communication network (Fig.2 item 12A is a Local Area Network), the formatted layered message having encoded data (Fig. 3, item 20A shows the formatted Ethernet message that is transmitted on the Local Area Network, with the headers of the respective layers) (Figs. 2 and 3, and col. 5, lines 19-32), the processing of the formatted layered message comprising the steps of:
- combining unformatted elements to link a plurality of layers (Fig. 5 and col. 9, lines 21-39. Fig. 5 item 106 represents one layer and shows the unformatted information in the layer. Item 107, which is the next layer, has a previous field with the address of item 106 thereby linking the layers);
- using a method (the chain walker is used to process/encode the packet or message through each of the layers in the chain) on the unformatted elements to form the formatted layered message (col. 5, lines 41-47).

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

18. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moberg et al.

19. Moberg et al, discloses substantial features of the claimed invention:

- Moving header field data of each layer into a message stream (Fig. 3, item 20C)
- The movement of header field data results in a formatted message stream having therein encoded data obtained from the linked plurality of layers (Fig. 3 and col. 5, lines 19-32 discloses a message ready for transmission which would be fully encoded).

Moberg et al, does not expressly disclose:

- moving trailer data of each layer into the message;
- the trailer field data associated with each layer comprises CRC/FCS data

20. However, Examiner takes Official Notice that the HDLC protocol specifications and Ethernet specification require a trailer value, which is a CRC value, to be included

in all messages. Note: the HTTP, TCP and IP layers do not have trailer values. The IP and TCP have a header checksum value, which is included in the header.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to understand that trailer data was included in an HDLC or Ethernet message and that the trailer value was a CRC value. Since Examiner takes Official Notice that moving trailer/CRC value into an HDLC or Ethernet message as conventional and well known.

Conclusion

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Pettus, US Patent 5,548,723 that discloses a dynamically configurable stack which is a message processing system that links a plurality of layers before encoding/decoding a message.
- Mein et al, US Patent 6,457,066 that describes the use of Objects to create an application layer protocol.
- Boucher et al, US Patent 6,434,620 that describes a TCP/IP offload Network device.
- Yu, US Patent 5,734,865 that shows the header options for an IP and TCP header (FIGURE 7e). It also shows an Ethernet frame with the checksum trailer (FIGURE 3).

- Chase et al, US Patent 6,081,524 that shows a frame relay frame in Fig. 4 that uses the HDLC format.

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Noel K Singh whose telephone number is (703)305-4651. The examiner can normally be reached on 8 A.M. to 5 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton B Burgess can be reached on (703)305-4792. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-7201 for regular communications and (703)305-7201 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

N.S.
September 8, 2003

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